

Applicant : Hamburg, et al.
Serial No. : 09/010,801
Filed : January 22, 1998
Page : 2

Attorney's Pocket No.: 07844-235001 / P212

changing the document state in response to each command;
each time the document state is changed, adding the changed document state to a state history maintained in a computer-readable memory device, the state history representing a history of document states of the document;
for each document state added to the state history, adding a corresponding entry to a history list displayed to the user on a computer-controlled display device operated as part of a graphical user interface; and
in response to a user action, selecting an item in the history list and establishing the document state corresponding to the selected item in the history list as the current state of the document.

16. A method implemented in a computer program application operable to create and edit a document, comprising:

maintaining in a memory a state history, the state history representing a history of document states of the document;

in response to a user action, selecting a first state from the state history and establishing the first selected state of the document as the current state of the document; in response to a user action, selecting a second state from the state history, the second state being a state created after the first state, as a source of data for an operation; and performing the operation with the data from the second state on the first state.

37. Apparatus comprising a computer-readable storage medium tangibly embodying program instructions defining a computer program application for performing operations on documents having states, the program comprising instructions operable for causing a programmable processor to:

maintain in a memory a state history, the state history representing a history of document states of the document; and

whenever an interesting operation has occurred, an interesting operation being an operation by a user that changes the state of the document, the state being complete in itself and

Applicant : Hamburg, et al.
Serial No. : 09/010,801
Filed : January 22, 1998
Page : 3

Attorney's Docket No.: 07844-235001 / P212

independent of other states; automatically capture the state of the document as it exists after the operation and add the captured state to the state history of the document.

39. Apparatus comprising a computer-readable storage medium tangibly embodying program instructions for interacting with a user editing a document in a computer program application, the document having a document state, the apparatus comprising instructions operable for causing a programmable processor to:

- receive from the user a sequence of commands to change the document;
- change the document state in response to each command;
- each time the document state is changed, add the changed document state to a state history maintained in a computer-readable memory device, the state history representing a history of document states of the document;

- for each document state added to the state history, add a corresponding entry to a history list displayed to the user on a computer-controlled display device operated as part of a graphical user interface; and

- in response to a user action, select an item in the history list and establish the document state corresponding to the selected item in the history list as the current state of the document.

40. A computer program, residing on a computer-readable medium, comprising instructions for causing a computer to:

- keep a state history, the state history representing a history of document states of the document;

- in response to a user action, select a first state from the state history and establish the first selected state of the document as the current state of the document;

- in response to a user action, select a second state from the state history, the second state being a state created after the first state, as a source of data for an operation; and
- perform the operation with the data from the second state on the first state.

41. A computer program, residing on a computer-readable medium, comprising instructions for causing a computer to:

Applicant : Hamburg, et al.
Serial No. : 09/010,801
Filed : January 22, 1998
Page : 4

Attorney's Docket No.: 07844-235001 / P212

keep a history of document states of a document; the document states being created automatically whenever a user command to the application changes the state of a document and being complete in themselves;

enable the user to discard any of the states in the history to create a revised history; and

enable the user to step backward and forward through the revised history and thereby alter the state of the document to be any of the document states in the revised history.

42. A computer program, residing on a computer-readable medium, comprising instructions for causing a computer to:

keep a history of document states of a document, the document states being created automatically whenever a user command to the application changes the state of a document and being complete in themselves;

enable the user to discard any of the states in the history to create a revised history; and

enable the user to designate any one of the document states in the revised history and thereby establish the designated state as the current state of the document.
